BOSTON'S STRONG ECONOMY – 2000

OVERVIEW

The city is the economic hub of both the Commonwealth and the New England region. It is a center for professional, business, financial, governmental, higher educational and medical services, as well as for transportation, communications, export, cultural and entertainment activities. As a government center, the city is the state capital and is host to federal regional offices. High technology, research and development, manufacturing, and wholesale distribution also contribute to the economy of the city and its suburbs.

The city is the twentieth largest city in the United States and the center of the seventh largest Consolidated Metropolitan Statistical Area (CMSA) in the nation, consisting of the Boston Primary Metropolitan Statistical Area (PMSA) plus the contiguous PMSAs of Brockton, Fitchburg-Leominster, Lawrence, Lowell, Manchester (NH), Nashua (NH), New Bedford, Portsmouth-Rochester (NH-ME), and Worcester (MA-CT). The Boston CMSA had a population of 5.6 million in 1998, as reported by the U.S. Department of Commerce, Bureau of the Census (the Bureau of the Census). In 1998, the city had a population of 555,447, as reported by the Bureau of the Census, and had 671,023 jobs as reported by the U.S. Bureau of Economic Analysis from data of the Massachusetts Department of Employment and Training. The ratio of jobs to population indicates that the city provides a direct source of employment and income for an area that extends well beyond its borders. Measured in terms of jobs, the city's economy comprises approximately 21% of the Massachusetts economy and 10% of that of the six New England states.

Boston's economy declined through the years 1988-1992 along with the rest of New England. Between 1992 and 1998, however, Boston's economy prospered. For example, Boston employment, which had declined by 67,311 jobs in the four years between 1988 and 1992, has gained back almost all of the losses as a total of 94,719 jobs were added in the 1992-1998 period according to data from the U.S. Bureau of Economic Analysis. Also, unemployment rates, which peaked during the first half of 1991 in the Commonwealth at 9.8%, in the Boston metropolitan area at 8.3%, and in the city at 9.5%, had all declined to levels between 2.4% and 3.0% in the Commonwealth, the Boston metropolitan area and the city by November 1999. Moreover, according to data regarding office market vacancy rates from CB Richard Ellis dated December 31, 1998, Boston ranked best among the 20 largest downtown office markets in the nation. Finally, the total number of residential sales has improved markedly from 1992 through third quarter 1999, as described more fully in "Housing Stock, Housing Values, and Development" below.

SOURCES OF STATISTICAL DATA [2]

Statistical data relating to population, employment and income are derived primarily from four separate sources: the U.S. Bureau of the Census, the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis (the BEA), and the City of Boston/Boston Redevelopment Authority (the BRA), each of which is described below.

The U.S. Bureau of the Census publishes information about population, housing and the economy. Data from the 1990 Decennial Census of Population and Housing remains the most recent comprehensive demographic data for the city. In addition, some monthly and quarterly data are available through October 1999 on certain topics for the region, Massachusetts, and the Boston metropolitan area. The U.S. Bureau of the Census does not publish such interim data for the city.

The U.S. Bureau of Labor Statistics publishes data and reports about the workforce and related subjects including unemployment rates, area wages, and cost-of-living adjustments. Final data for 1998 are the most recent annual data available; the most recent monthly data are for November 1999.

The U.S. Bureau of Economic Analysis publishes quarterly and annual statistics on income and employment. The most recent annual figures for the nation, New England and Massachusetts are from the July 27, 1999 Regional Economic Information System (REIS) and from the May 1999 REIS revised series for the metropolitan counties and Suffolk County, which consists of the city plus the municipalities of Revere, Chelsea and Winthrop. The most recent quarterly statistics are for the second quarter of 1999. The city comprises approximately 87% of Suffolk County's population and approximately 96% of its employment.

---

[2] *This report draws from the City of Boston's official financial statement to Wall Street using the latest available statistics as of December 1999. The previous section of this report includes some more recent data.*

Table 1. Population, Income and Employment
1988, and 1994-1998
(income in current year dollars)

	1988	1994	1995	1996	1997	1998
United States						
Total Personal Income ($000)	$4,165,890,000	$5,741,050,000	$6,059,091,000	$6,408,103,000	$6,770,650,000	$7,158,176,000
Per Capita Income ($)	$17,038	$22,056	$23,059	$24,164	$25,288	$26,482
Population	244,499004	260,289,000	262,765,000	265,190,000	267,744,000	270,299,000
Employment	134,675,900	145,650,300	149,362,500	152,657,000	156,400,400	n/a
New England						
Total Personal Income ($000)	$272,285,715	$343,175,136	$364,142,000	$384,540,000	$406,858,000	$429,852,000
Per Capita Income ($)	$20,810	$25,935	$27,441	$28,872	$30,428	$32,009
Population	13,084,523	13,232,000	13,270,000	13,319,000	13,371,000	13,429,000
Employment	8,095,445	7,872,874	8,032,993	8,188,545	8,377,360	n/a
Massachusetts						
Total Personal Income ($000)	$128,074,258	$159,316,971	$170,211,000	$179,998,000	$191,008,000	$202,252,000
Per Capita Income ($)	$21,417	$26,434	$28,097	$29,590	$31,241	$32,903
Population	5,979,983	6,027,000	6,058,000	6,083,000	6,114,000	6,147,000
Employment	3,777,685	3,660,234	3,747,670	3,825,405	3,921,971	n/a
Metropolitan Boston (1)						
Total Personal Income ($000)	$87,797,858	$109,846,867	$117,792,083	$124,815,181	132,629,709	n/a
Per Capita Income ($)	$23,186	$29,015	$30,896	$32,574	34,418	n/a
Population	3,786,629	3,785,927	3,812,510	3,831,776	3,853,524	n/a
Employment	2,601,932	2,503,811	2,562,901	2,621,054	2,691,300	n/a

(1) This metropolitan area only includes five counties in Massachusetts (Essex, Middlesex, Norfolk, Plymouth and Suffolk) but excludes the one county in New Hampshire (Hillsborough) which together comprise the NECMA (New England Counties Metropolitan Area).
Source: U.S. Department of Commerce, Bureau of Economic Analysis, May 1998, Regional Economic Information System for U.S., New England, and Massachusetts. Metropolitan Boston data for 1987 and 1993-1997 from BEA May 1998 revised series.

The city and the BRA prepare reports and compile data on the population and economy of the city and its neighborhoods. The BRA also provides data and trends from various local, regional, state and national sources on such topics as employment and occupation, large employers, city schools, universities and colleges, medical institutions, tourism and lodging, transportation, office and industrial markets, housing, building activity and urban redevelopment and infrastructure projects.

Statistical data do not necessarily reflect current activity because of delays resulting from the time required to collect, tabulate and publish such data. While the city believes that it has used the most recent data readily available to it in the discussion in this section, because of such necessary delays, the data contained herein may not reflect current conditions or trends. Additionally, statistical data are approximations and generalizations subject to various sources of error inherent in the statistical process, and may be revised on the basis of more complete data. Within such limits, the statistical data contained herein describe past activity and are not presented with a view to predicting future economic activity either in particular categories or in general.

NEW ENGLAND, MASSACHUSETTS AND METROPOLITAN BOSTON ECONOMIES

New England comprises a six-state region that has a combined population of 13.43 million persons in 1998 and nearly 8.38 million jobs in 1997 according to the U.S. Census Bureau and the Bureau of Economic Analysis annual data. For most of the 1980s, the rate of growth in total personal income, per capita income and population for New England was higher than the national average. In the 1988-1992 period, this trend reversed as the New England economy experienced a regional recession. Total personal income in New England grew at an annual average compound rate of 5.1% from 1987 through 1997, just below the 5.8% national rate for the same period. In the most recent period for which data is available, from second quarter 1998 through second quarter 1999, personal income in New England grew at a rate of 5.3%, which was just below the national rate of 5.4%. Employment in New England, which grew by 1,404,603 jobs from 1982 through 1988 at a rate of 3.2% annually, declined by 455,210 jobs from 1988 through 1992 and then rose by 737,125 jobs from 1992-1997. Thus, the net job gain between 1982 and 1997 was 1,686,518 jobs, an annual average of 1.5%.

The Massachusetts economy, with 6.15 million people in 1998 and 3.92 million jobs in 1997, has shown the same three cycles of growth, recession, and growth over the 1982-1997 era. Total personal income grew at a 5.1% annual average rate from 1987 through 1997. From second quarter 1998 through second quarter 1999, it grew by 5.4%, which was the same as the 5.4% national average. Massachusetts gained 622,312 jobs in the six-year period of 1982-1988, an average annual growth rate of 3.0%. It lost 260,215 jobs between 1988 and 1992 as high-technology, defense and financial firms consolidated. From 1992-

Table 2. City of Boston Employment, 1988, and 1994-1998
Selected Years by Industry

Industry	1988	1994	1995	1996	1997	1998
Fishing/Mining/Agriculture	1,387	1,453	1,232	1,248	1,312	1,322
Construction	16,519	12,602	13,274	13,074	13,776	16,094
Manufacturing	34,919	29,584	29,114	29,135	28,596	29,704
Transportation/Communication/Utilities	37,820	36,515	36,382	36,328	37,232	37,301
Wholesale Trade	23,282	15,516	16,393	16,385	16,242	16,610
Retail Trade	62,714	60,371	61,309	62,736	63,350	65,397
Finance/Insurance/Real Estate	104,324	92,820	94,188	97,118	101,256	104,194
Banking	30,144	22,860	23,461	20,376	21,490	22,552
Securities	21,240	30,594	31,980	38,724	42,171	44,925
Insurance	33,871	26,412	25,449	24,046	23,422	22,141
Real Estate and Other	19,069	12,955	13,299	13,973	14,172	14,573
Services	265,558	278,900	286,019	292,900	301,446	309,008
Hotel	12,552	12,180	11,892	11,742	11,750	12,430
Health	76,057	92,024	92,133	94,692	96,085	97,401
Educational	30,934	31,190	33,167	33,321	32,739	33,268
Cultural	9,592	9,657	9,333	9,982	10,536	10,847
Social and Non-profit	23,158	23,688	24,374	24,261	25,115	25,529
Professional	63,063	62,285	65,928	67,260	70,857	74,781
Non-Professional Business	37,335	36,927	37,587	39,855	42,003	41,977
Personal and Repair	12,868	10,949	11,605	11,787	12,362	12,775
Government	97,093	87,135	91,625	89,058	89,589	91,392
Total	643,615	614,895	629,536	637,982	652,798	671,023

Note: The only data for 1999 are for the first two quarter of the year from the ES-202 series which when translated into the BEA format and annualized results in a yearly estimate of 689,323 jobs, an 18,531 job gain from 1998 and a rate of 2.8%. Since this is only based on one quarter of the year, the most cyclical quarter of the four, this estimate is just noted here as preliminary and subject to confirmation when more data from the remainder of the year is reported.

Source: 1988-1998 figures are mathematically derived from U.S. Bureau of Economic Analysis Series for Suffolk County ("BEA Regional Economic Information System, 1969-1996, May 1998") pro-rated to Boston geography. 1997 data are based on Massachusetts Division of Employment and Training ES-202 series (this series represents payroll jobs covered by the unemployment security system). These Boston employment data are used to derive an equivalent 1997 BEA series (for all jobs, full and part-time). Due to use of pro-rating factors, minor discrepancies of 1 to 3 units between totals and employment categories may result.

1997 job growth reemerged as 404,501 jobs were gained. The Commonwealth therefore had a net rise of 766,598 jobs during the period from 1982 through 1997, an annual average of 1.5%.

The five-county Boston metropolitan area (consisting of Essex, Middlesex, Norfolk, Plymouth, and Suffolk counties), which had 3.85 million people in 1998 and 2.69 million jobs in 1997, has shown economic trends similar to those for the Commonwealth. Growth of 427,573 jobs from 1982 through 1988 was offset by the loss of 193,671 jobs from 1988 through 1992. The most recent data show a gain of 282,069 jobs for the 1992-1997 period. Table 1 shows the 1988, and 1994-1998 metropolitan trends. Employment data for the city are set forth in Table 2.

EMPLOYMENT STRUCTURE, EMPLOYMENT TRENDS AND OCCUPATIONAL CHANGES

Between 1988 and 1998, city employment continued to shift from traditional labor intensive manufacturing jobs to technology and service jobs, as shown in Table 2. Over the past ten years, the full range of services, including transportation, communication, public utilities, finance, insurance and the full range of services, expanded their share of the city's total employment from 63.3% in 1988 to 67.1% in 1998, while the total employment in manufacturing and trade declined from 5.4% to 4.4%, and from 13.4% to 12.2%, respectively.

Table 3. Job Change in the New England Region, 1982-1997

Area	1982-1988 Total Job Change	1982-1988 Percent Change	1988-1992 Total Job Change	1988-1992 Percent Change	1992-1997 Total Job Change	1992-1997 Percent Change	1982-1997 Total Job Change	1982-1997 Percent Change
New England	1,404,603	21.0	(455,210)	(5.6)	737,125	9.7	1,686,518	25.2
Massachusetts	622,312	19.7	(260,215)	(6.9)	404,501	11.5	766,598	24.3
Metropolitan Boston (1)	427,573	19.7	(193,671)	(7.4)	283,039	11.7	516,941	23.8
City of Boston	79,005	14.0	(67,311)	(10.5)	76,494	13.3	88,188	15.6

(1) This metropolitan area includes the following five Massachusetts counties: Essex, Middlesex, Norfolk, Plymouth and Suffolk.
Source: U.S. Bureau of Economic Analysis (BEA) for New England and Massachusetts from September 1998 revised series. Metropolitan Boston 1982-1997 from REIS, May 1998 series.

The economy of the Boston metropolitan area primarily rests on high technology, finance, professional and business services, defense, and educational and medical institutions. The city's economy is more specialized in the financial, governmental, business and professional services and educational and medical sectors than the suburban economy, which is more specialized in high technology and the defense industry. As used in this section, "professional services" includes business and professional services such as data processing, bookkeeping, new syndicates, law, accounting, engineering, advertising, and architecture. "Non-professional business services" includes building maintenance, security guards, duplicating services, etc.

Table 3 shows Boston's employment growth by industry category over the ten-year period 1988-1998. Significant gains by industry are noted in the financial securities, health, educational, social, non-profit, cultural, non-professional business and professional services sectors while sizable losses are evident in manufacturing, wholesale trade, banking, insurance, and government.

The Boston metropolitan area comprises about two-thirds of the Massachusetts state economy, which is interrelated with the economies of the other New England states. Consequently, the city's job changes over the last three cycles of growth (1982-1988), recession (1988-1992), and growth (1992-1997) must be viewed in a regional context. Table 4 charts employment changes over the three regional business cycles. It clearly shows how severe the effect of the 1988-1992 recession had been on the regional economy, but also shows how strong the economic recovery has been since 1992. The growth of 79,005 jobs from 1982 through 1988, the period of rapid growth, was offset by the loss of 67,311 jobs from 1988 through 1992, the recessionary period. Trends during the present expansion, for 1992 through 1997, show a gain of 72,762 jobs. The City of Boston, metropolitan Boston, Massachusetts, and New England have all experienced net job growth over the fifteen-year period.

As of 1990, 67% of city residents were white-collar workers, 17% were service workers and 16% were blue-collar workers, as compared to 60% white-collar workers, 18% service workers and 22% blue-collar workers in 1980. As shown in the following table, this trend among city residents away from blue-collar occupations and toward white-collar and service occupations has continued since 1960. Job losses during the 1988-1992 recession, as reflected in occupational employment data for the Boston metropolitan area by the Massachusetts Department of Employment and Training, show about equal losses for white-collar and blue-collar employees.

Table 4. Occupational Change in the City's Resident Labor Force

	1960		1970		1980		1990	
	Number	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
White-Collar	126,471	44	146,657	55	154,456	60	191,251	67
Professional & Technical	33,476	12	44,894	17	51,979	20	65,251	23
Managerial	15,604	5	15,035	6	25,238	10	41,955	15
Clerical & Administrative	58,990	21	71,655	27	58,451	23	56,950	20
Sales	18,401	6	15,073	6	18,788	7	27,095	9
Blue-Collar	96,576	34	75,160	28	54,452	22	47,498	16
Craftsmen	32,398	11	27,157	10	19,772	8	18,453	6
Operatives	52,175	18	36,695	14	24,825	10	19,971	7
Laborers & Farm	12,003	4	11,308	4	9,855	4	9,074	3
Service	38,034	13	44,688	17	47,109	18	49,955	17
Not Reported	27,115	9	—	—	—	—	—	—
Total	**288,196**	**100%**	**266,505**	**100%**	**256,017**	**100%**	**288,704**	**100%**

Source: U.S. Department of Commerce, Bureau of the Census for 1960, 1970, 1980 and 1990. Percentages may not add due to rounding.

Table 5. Annual Unemployment Rates

	1990	1991	1992	1993	1994	1995	1996	1997	1998
City of Boston	5.6%	8.4%	8.0%	6.6%	5.8%	5.4%	4.4%	4.3%	3.3%
Boston PMSA (1)	5.3	7.8	7.5	6.0	5.2	4.7	3.7	3.5	2.8
Massachusetts	6.0	9.1	8.6	6.9	6.0	5.4	4.3	3.9	3.3
New England	5.7	8.0	8.1	6.8	5.9	5.4	4.8	4.4	3.6
United States	5.6	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5

(1) Primary Metropolitan Statistical Area, consisting of the City of Boston and 129 contiguous municipalities, with a population of approximately 3.2 million in 1990 according to U.S. Census data.

Sources: U.S. Bureau of Labor Statistics for United States, New England and Massachusetts and Massachusetts Division of Employment and Training for the City of Boston and Boston PMSA.

UNEMPLOYMENT

Unemployment in the city increased on an annual basis from a low of 3.2% in 1987 to a high of 8.4% in 1991. The city's average annual unemployment rate remained below the national rate through 1989, equaled the national rate in 1990, and exceeded the national rate in 1991 and 1992. Unemployment rates for Boston, Greater Boston, Massachusetts and the New England region generally exceeded the national average in the 1990-1992 recessionary period for the first time in more than a decade. Since 1993 though, these regional rates have once again gone below the national rate. November 1999 data show that the city's unemployment rate of 3.0% was just below the Massachusetts rate of 3.0% and much better than the national rate of 3.8%. As Tables 6 and 7 illustrate, 1998 and 1999 monthly unemployment data show a general improvement over results from 1997. As of November 1999, 9,160 Boston residents were unemployed. The 1990 Census data for Boston, which differ from the Bureau of Labor Statistics rates shown below due to sample size, showed that when Boston's total unemployment rate was 8.3%, the rate for whites was 6.4%, the rate for all minority groups combined was 12.6%, and the rate for all youth aged 16-19 years was 18.9%. This pattern is typical of many of the nation's urban centers.

Table 6. Monthly Unemployment Rates for City of Boston, Boston PMSA, Massachusetts, New England and the United States for 1998 and 1999 (1)

	Boston	PMSA(2)	Mass.	N.E.	U.S.
Oct. 1998	3.0	2.5	2.8	3.1	4.2
Nov.	2.6	2.2	2.7	3.0	4.1
Dec.	2.6	2.2	2.7	2.9	4.0
Jan. 1999	3.4	3.0	3.9	3.9	4.8
Feb	2.9	2.6	3.3	3.7	4.7
Mar.	2.9	2.6	3.3	3.5	4.4
Apr.	2.6	2.2	2.7	2.9	4.1
May	3.0	2.5	2.9	3.1	4.0
Jun.	3.4	2.7	3.1	3.3	4.5
Jul.	3.5	2.7	3.2	3.1	4.5
Aug.	3.3	2.6	2.9	2.7	4.2
Sep.	3.4	2.7	3.0	2.8	4.1
Oct.	3.2	2.5	2.8	2.8	3.8
Nov.	3.0	2.4	2.8	2.9	3.8

(1) Rates not seasonally adjusted. Most recent are subject to revision.

(2) Primary Metropolitan Statistical Area, consisting of the City of Boston and 129 contiguous municipalities, with a population of approx. 3.2 million in 1990 according to U.S. Census data.

Sources: U.S. Bureau of Labor Statistics for United States, New England and Massachusetts and Massachusetts Division of Employment and Training for the City of Boston and Boston PMSA

Table 7. Monthly Unemployment Rates For Boston, Boston PMSA, Massachusetts, New England and the United States for 1996, 1997 and 1998 (1)

	City of Boston			Boston PMSA(2)			Massachusetts			New England			United States		
	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
Jan.	5.1%	4.3%	3.8%	4.6%	3.8%	3.4%	5.6%	4.8%	4.3%	5.9%	5.4%	4.6%	6.3%	5.9%	5.2%
Feb.	4.9	4.1	3.4	4.4	3.6	3.1	5.4	4.6	4.0	5.8	5.2	4.4	6.0	5.7	5.0
Mar.	4.8	4.2	3.8	4.2	3.7	3.4	5.2	4.6	4.1	5.4	5.0	4.2	5.8	5.5	5.0
Apr.	4.6	4.0	2.9	3.8	3.4	2.4	4.5	4.1	3.0	4.9	4.6	3.4	5.4	4.8	4.1
May	4.5	4.0	3.5	3.5	3.3	2.8	4.1	3.8	3.2	4.6	4.3	3.4	5.4	4.7	4.2
Jun.	5.0	4.6	3.9	3.9	3.7	3.0	4.4	4.2	3.5	4.8	4.5	3.5	5.5	5.2	4.7
Jul.	4.7	4.5	3.6	3.7	3.5	2.7	4.2	4.1	3.2	4.7	4.4	3.3	5.6	5.0	4.7
Aug.	4.3	4.5	3.2	3.4	3.5	2.4	3.8	3.9	3.0	4.4	4.2	3.1	5.1	4.8	4.5
Sep.	4.6	4.6	3.7	3.6	3.6	2.9	4.0	4.0	3.4	4.4	4.0	3.3	5.0	4.7	4.4
Oct.	4.0	3.9	3.0	3.1	3.0	2.5	3.5	3.4	2.8	4.2	3.8	3.1	4.9	4.4	4.2
Nov.	3.7	3.7	2.6	3.0	3.0	2.2	3.5	3.5	2.7	4.3	3.8	3.0	5.0	4.3	4.1
Dec.	3.6	3.3	2.6	2.9	2.8	2.2	3.5	3.4	2.7	4.3	3.8	2.9	5.0	4.4	4.0

(1) Unemployment rates are not seasonally adjusted. Most recent data are preliminary and subject to revision.

(2) Primary Metropolitan Statistical Area, consisting of the City of Boston and 129 contiguous municipalities, with a population of approximately 3.2 million in 1990 according to U.S. Census data.

Sources: U.S. Bureau of Labor Statistics for United States, New England and Massachusetts and Massachusetts Division of Employment and Training for the City of Boston and Boston PMSA.

Table 8. Largest Private Employers in Boston, 1996-97
(listed alphabetically)

American Airlines	Gillette Company
Au Bon Pain	Harvard/Pilgrim Health
BankBoston	John Hancock Mutual Life Ins. Co.
Bell Atlantic	Liberty Mutual
Beth Israel/Deaconess Hospital	Liberty Financial Cos. Inc.
Blue Cross/Blue Shield	Marriott International
Boston Edison	Massachusetts Eye and Ear Infirmary
The Boston Globe	Massachusetts General Hospital
Boston Medical Center	The New England (Life Insurance Co.)
Boston University	New England Medical Center
Brigham and Women's Hospital	Northeastern University
Carney Hospital	Putnam Investments
Children's Hospital	St. Elizabeth Medical Center
Coopers & Lybrand L.L.P.	Star Market
Dana Farber Cancer Institute	State Street Bank & Trust Co.
Delta Airlines	Stone & Webster
Faulkner (Hospital) Corp.	Stop & Shop
Federal Reserve Bank of Boston	Teradyne, Inc.
Fidelity Investments (FMR Corp.)	Thomson Financial Services
Filene's	USAirways
First Security Services Corp.	Visiting Nurses Association of Boston
Fleet Bank of Massachusetts	

Source: Survey by BRA/EDIC, conducted in 1996-1997.

LARGEST EMPLOYERS

Table 8 lists the forty-three largest private employers in Boston, the total list of organizations with more than 1,000 employees, which had an aggregate of approximately 134,000 employees in 1997, or about 21% of private sector employment.

In addition, the public sector has large numbers of employees in the city. According to the Bureau of Economic Analysis, there were 91,392 government workers in the city in 1998, a reduction of 5,701 from 1988. Certain state government offices, federal regional offices, U.S. Postal Service facilities, state-chartered authorities and commissions, such as Massport and the MBTA, and the city's local government are all located within the city.

LABOR FORCE AND EDUCATION

According to U.S. Department of Commerce, Bureau of the Census, the city's resident labor force declined during the 1970s but increased during the 1980s. In contrast to the 12% decline in population between 1970 and 1980, the city's labor force (those residents aged 16 and over, available to work) declined by only 4%. The difference in these rates of decline was attributable to the fact that the decline in population was concentrated in the under-16 age group. Since 1980, both the increasing population and its increasing age have combined with the rising labor force participation of women, minorities, youth and the elderly to produce a larger labor force. By 1990, the city's population had increased by 2% over 1980 levels, while the city's labor force increased by 12.8% in the same period, according to data from the U.S. Bureau of the Census.

Table 9. Years of School Completed for Boston Residents Age 25 and Over, 1970-1990

	1970		1980		1990	
	Persons	**Percent**	**Persons**	**Percent**	**Persons**	**Percent**
0-8 years	91,582	26.1%	54,932	16.6%	37,824	10.3%
1-3 years of high school	71,511	20.4	49,407	14.9	51,051	14.0
High school graduate	120,350	34.3	115,787	35.0	97,233	26.6
1-3 years college	30,876	8.8	43,451	13.2	69,889	19.1
4 or more years of college	36,245	10.4	67,073	20.3	109,711	30.0
Total	350,564	100.0%	330,650	100.0%	365,708	100.0%

Source: U.S. Department of Commerce, Bureau of the Census; 1970, 1980 and 1990.

Table 10. Per Capita Personal Income Comparison, 1970, 1980, and 1988-1998
(in current year dollars not adjusted for inflation)

	United States	New England	Massachusetts	Metro Boston(1)	Suffolk County(2)
1970	$ 4,077	$ 4,479	$ 4,547	$ 4,571	$ 4,728
1980	10,062	10,705	10,780	10,888	10,624
1988	17,038	20,810	21,417	23,186	21,020
1989	18,153	22,103	22,634	24,523	23,238
1990	19,156	22,742	23,211	25,320	25,017
1991	19,624	23,076	23,593	25,826	25,549
1992	20,546	24,142	24,541	27,000	26,862
1993	21,220	24,896	25,335	27,798	27,765
1994	22,056	25,934	26,433	29,015	29,063
1995	23,059	27,439	28,097	30,896	30,551
1996	24,164	28,872	29,591	32,574	32,067
1997	25,288	30,427	31,239	34,418	33,860
1998	26,582	32,007	32,902	NA	NA

(1) Metropolitan Boston denotes the New England County Metropolitan Area (NECMA), which is larger than the Primary Metropolitan Statistical Area (PMSA). The NECMA consists of five Massachusetts counties and Hillsborough County in New Hampshire.
(2) City residents constitute approximately 87% of Suffolk County's population.
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis, May 1999 revised series, Regional Economic Information System for Metro Boston and Suffolk County and July 1999 series for the U.S., Massachusetts and New England.

General improvement in educational attainment of residents aged 25 and over continued throughout the 1970-1990 period. The percentage of this population that had completed four or more years of college almost tripled during this period from 10.4% to 30%.

This change, in part, reflected the trend for an increasing percentage of graduates of the city school system to seek higher education. This percentage increased from 25% in 1960 to 36% in 1970, 44% in 1977, 54% in 1982 and 66% in 1990, and declined slightly to 60.6% in 1997, based upon Boston School Department figures. Improving educational attainment levels and shifting occupational patterns suggest a concurrent transformation of the city's work force as the city's economy has moved to a service-dominated base.

The city supports entry-level and advanced job training programs, including the following: English-as-a-Second Language training, pre-vocational and vocational training, adult literacy training, and support counseling. In addition, linkage contributions paid into the Neighborhood Jobs Trust provide a supplemental source of funding for job training programs. For a full discussion of the city's housing and jobs linkage program see "The Linkage Program".

INCOME, WAGES, AND COST OF LIVING

Per capita personal income for Suffolk County was $33,860 in 1997, 34% above the national per capita personal income of $25,288, according to the U.S. Bureau of Economic Analysis. An historical summary of per capita income shows that from 1980 to 1990 Suffolk County's per capita income grew at a rate greater than that for the nation, in contrast to the 1970-1980 period when it rose at a slower rate. Suffolk County's per capita income grew at a faster rate than the per capita income growth rates for the United States, New England, and Massachusetts and just barely below the rate of growth for Metropolitan Boston (as defined in Table 10) between 1990 and 1997. The city's median household income (in current year dollars), based on U.S. Census data, rose from $7,835 in 1970, to $12,530 in 1980 and $29,180 in 1990. Median household income in 1995 for Suffolk County (of which Boston is 87% of population.) was estimated at $32,836 in current dollars. These figures reflect earned income of persons residing in the named areas plus rents, interest and other unearned income and transfer payments from governmental entities. As such, these figures take into account certain income sources not included in the survey of average annual wages in the following paragraph, which reflects earned income of persons who work (but do not necessarily reside) in the named areas.

May 1999 data from the U.S. Bureau of Economic Analysis indicate that average annual earnings per job for 1997, by place of work, have been consistently higher over time in Suffolk County than in the Boston metropolitan area and the Commonwealth. Suffolk County's average earnings per job ($46,961) was 29% greater than that in the Boston metropolitan area ($36,349) and 32% greater than the average state earnings level ($35,563). The average annual earnings per job reflect the combined income earned by individuals at their place of work for all industries combined.

Table 11. Population of Massachusetts, Metropolitan Boston, and the City of Boston 1970, 1980, 1990 and 1998[1]

					1970-80		1980-90		1990-98	
	1970	1980	1990	1998	Number Change	Percent Change	Number Change	Percent Change	Number Change	Percent Change
Massachusetts	5,689,170	5,737,037	6,016,425	6,147,132	47,867	0.8 %	279,388	4.9%	130,707	2.2%
Metro. Boston[2]	2,899,101	3,149,000	3,227,707	3,289,096	_ [3]	_ [3]	78,707	2.5	61,389	1.9
City of Boston	641,071	562,994	574,283	555,447	(78,077)	(12.2)	11,289	2.0	(18,836)	(3.3)

(1) 1998 population numbers are estimates rather than counts.
(2) Boston PMSA.
(3) Because of a metropolitan area boundary change from Standard Metropolitan Statistical Area (SMSA) to PMSA, the 1970-
Source: U.S. Department of Commerce, Bureau of the Census.

During the ten years 1988-1998, based on the U.S. Bureau of Labor Statistics Consumer Price Index, the cost of living index rose at an annual average rate of 3.32% in the Boston metropolitan area, while the national index increased at a 3.26% annual rate. From November 1998 to November 1999, the cost of living in the Boston metropolitan area rose 3.4%, compared to a 2.6% rate for the nation.

POPULATION

The U.S. Bureau of the Census reported the city's population as 574,283 in 1990, a 2% increase over 1980 and the first increase since 1950. The number of households in the city increased from 217,622 in 1970, to 218,457 in 1980, and to 228,464 in 1990, while household size fell from 2.8 to 2.4 persons per household from 1970 to 1990. The U.S. Bureau of the Census population estimate for Massachusetts in July 1998 was 6,147,132, or an increase of 130,707 persons (2.2%) from the 1990 census. The most recent local Census Bureau population estimate for Boston is as of July 1998, which showed a decline of 3.3% since April 1990, from 574,283 to 555,447. The Massachusetts Institute for Social and Economic Research (MISER) believes that the U.S. Bureau of the Census estimate for July 1998 understates the city's current population, and has asked them to review the methodology employed to produce the estimate.

MEDICAL AND HIGHER EDUCATIONAL INSTITUTIONS

Boston's medical and educational institutions are an important component of its economy, providing employment opportunities for residents of the city and the Boston metropolitan area. Expenditures by the institutions' patients, students and visitors are important to the city's trade and service sectors.

Twenty-five inpatient hospitals are located within the city, including Massachusetts General Hospital, Brigham and Women's Hospital, Beth Israel/ Deaconess Hospital, Children's Hospital, the New England Medical Center and Boston Medical Center. The city is also the home of the medical and dental schools of Harvard, Tufts and Boston Universities, and of twenty-five public neighborhood health clinics, not including health maintenance organizations and membership clinics.

In 1998, there were an estimated 97,401 persons employed in health services in the city, based on a series consistent with U.S. Bureau of Economic Analysis data. Health services represent over 1 out of every 7 jobs within the city. Growth in the health services sector has been stable, despite varying economic conditions. Data from the U.S. Bureau of the Census, County Business Patterns, showed that the number of hospital employees in Suffolk County between 1987 and 1997 grew from 47,154 to 51,632.

According to the BRA, the city's hospital and medical school community invested close to $1.1 billion in new facilities from 1984 to 1999. Large new projects were completed over the 1984-1996 period at the following city hospitals: Massachusetts General Hospital, Beth Israel/Deaconess Hospital, Brigham and Women's Hospital, Boston Medical Center, St. Elizabeth's and New England Medical Center. In 1997 several hospital projects were completed including a Dana Farber research building and a Beth Israel ambulatory care facility. In 1999 the Shriner's Burns Institute's new building and the Franciscan Hospital gymnasium were completed.

As of December 1999 there was one hospital project and a variety of medical research projects set to begin. Children's Hospital has two buildings approved for construction: a medical research building of 245,000 square feet and a clinical building of 194,000 square feet, the construction of which will begin in 2000 and 2001, respectively. Tufts University's $40 million biomedical research building and nutrition center of 148,000 square feet on Harrison Avenue is also slated to commence construction in June. In the Longwood area, the Harvard Institute of Medicine is set to begin the second phase of the renovation of the old English High into medical research space with a 400,000 square-foot project. In addition, Emmanuel College has two medical research buildings in the review process: a building of 320,000 square feet to be occupied by the Merck pharmaceutical company and a speculative research building of 186,000 square feet which is expected to start in March 2001.

Over the past eight years, there have been major hospital and health care mergers, acquisitions, and affiliations in the Boston area. During 1998 and 1999 several hospitals and health care providers have reported financial difficulties mainly due to the problems associated with rapid expansion, containment of health care costs, the changing nature of Medicare and Medicaid funding, and the effects of the Balanced Budget Act of 1997 on revenues. In early January 2000 Harvard Pilgrim Health Care, an HMO, was placed in State receivership. In early 2000 Beth Israel/Deaconess announced a planned cutback of 6.5% in operations which would mean the elimination of about 500 non-medical jobs.

Based on data from the National Institutes of Health for fiscal 1998, the city is the nation's largest center for health research, topping New York City for the fourth consecutive year. For fiscal 1998, the medical research institutions within Boston received $845.8 million in National Institutes of Health awards. This was a 9.5% increase (after adjusting for inflation) from fiscal year 1997. Partial 1999 data reveals that institutions located in the city received $943.3 million NIH grants already for the year through November 29, 1999. According to the National Institute of Health Division of Research Grants, six of the seven independent hospitals in the nation which received the most National Institutes of Health research funding in fiscal 1998 were located in the city. In addition to public monies for medical research the Boston institutions also have private funding sources through agreements with such companies as Sandoz Pharmaceutical Ltd. and Shiseido to name only two.

Boston is one of the nation's largest centers of medical research activities and biotechnology industries. According to the BRA, in 1990 the city's medical research institutions occupied nearly 4 million square feet of research space and there is demand for additional space. In Massachusetts, one of the leading biotechnology centers in the United States, there were over 215 companies engaged in research and development and manufacturing of biotechnology products as well as scientific, equipment, supplies and support services to the industry in 1998 according to the Massachusetts Biotechnology Council. The Ernst & Young twelfth annual biotechnology industry report, "New Directions, 1998," showed the New England Region as the nation's second largest center for biotechnology by number of publicly-traded companies (54), total assets ($4.6 billion), and R&D spending ($976 million), as well as the nation's third largest center as ranked by employees (12,426), product sales ($1.2 billion), and total revenues ($1.8 billion).

As of academic year 1997-98, the New England Board of Higher Education reported 75 colleges and universities in the Boston metropolitan area (PMSA), at which approximately 252,635 students were enrolled. The city's 35 universities, colleges and community colleges had a combined enrollment in fall 1997 of approximately 135,480, an 7.6% gain from fall of 1990. These numbers include some graduate schools of Harvard and Tufts Universities, whose principal campuses are in Cambridge and Medford, respectively, which had 8,708 students in the city in 1997. Based on total graduate and undergraduate enrollment, Boston University is the largest university in Boston, with 29,387 students in fall 1997.

Educational institutions are a source of new highly skilled professionals for the city's labor force. For example, according to the Massachusetts Institute of Technology, although only 10% of its enrollees over the decade of the 1980s were from the Boston area, 24% remained in the area after graduation.

From 1991 through 1998, large projects at educational institutions in the city accounted for approximately $300 million of investment, according to the BRA. These included new construction at Boston University, Northeastern University, Tufts University, Boston College, the Massachusetts College of Pharmacy, and Harvard University, as well as major renovations by Emerson College and Suffolk University. Recently completed projects include: the Boston University School of Management and the Photonics Center; Emerson College dormitory and administration space in renovated buildings, Suffolk University dormitory space; and, at Northeastern University, the Marino Recreation Center and a new Engineering and Science building. Completed in 1999 were the new $65 million Suffolk University Law School on Tremont Street in downtown Boston and a new dormitory at Northeastern University with 630 beds. Several other university projects are ongoing: a dormitory for Boston University students at the Armory site with 819 beds is almost finished and will open in the fall of 2000 and two smaller dormitories at Northeastern University with 470 beds have begun construction. In the approval process are two dormitories, at Massachusetts College of Art and at Wentworth Institute. At the Business School campus of Harvard University, where a five-year expansion and retrofit program is underway, new executive student housing is now complete, a new student center is under construction, and a graduate school housing project is now under review.

TOURISM

According to the Greater Boston Convention and Visitors Bureau (CVB), an estimated 11.5 million people visited the Boston metropolitan area in 1998, up by 4% from the 11.1 million visitors in 1997 and up 11.7% from the 10.3 million visitors in 1995. These data represent visitors, measured as tourists, business travelers and convention and meeting delegates who traveled at least 100 miles to get to the city. The latest data on the economic impact of tourism from the Massachusetts Office of Travel and Tourism (MOTT) shows that, for the five county region of greater Boston, visitors spent an estimated $7.1 billion for hotel accommodations, meals, entertainment, shopping, transportation and other services during 1998.

In recent years several large tourist events have taken place in Boston. In July 1992, Sail Boston, the tall ships flotilla, drew an estimated 6 million attendees, including visitors (as defined above) and local residents who directly spent an estimated $315 million in restaurants, shops, and hotels with a total estimated economic impact of $500 million. During the summer of 1994, greater Boston was a regional host of the World Cup soccer championship. In April 1996, the 100th anniversary of the Boston Marathon attracted a record field of 38,708 runners and an estimated 750,000 spectators along the route, with 150,000 of them at the Copley Square finishing line. In August 1998 the 200th Anniversary of the refurbished frigate USS Constitution, “Old Ironsides,” was celebrated with a gala three-day event with other tall ships from around the world in attendance. Also in 1998, the “Monet in the 20th Century” exhibition at the Museum of Fine Arts, the only showing in the United States, topped all museum exhibits in the United States with almost 566,000 visitors. In 1999 Boston hosted the All Star Game of Major League Baseball, while in nearby Brookline the Ryder Cup of golf and the Davis Cup of tennis were held, all of which had major economic impacts on the region. Every year there are a wide variety of special events in Boston including food, cultural, and musical events, ethnic celebrations, harbor, seaport and river festivals, parades, and collegiate and professional sporting contests which attract many visitors. In 1997 there were an estimated 75 such events in addition to the regular schedules of the three major professional sports teams - the Boston Red Sox baseball team, the Boston Bruins hockey team and the Boston Celtics basketball team. The city provides a venue for concerts, ice shows, circuses, plays, and other entertainment and sports events. A new privately financed, multi-purpose arena in Boston’s North Station District constructed by the New Boston Garden Corporation, a subsidiary of Delaware North, owner of the existing Boston Garden/North Station, opened on September 30, 1995.

Boston is an attractive destination for conventions, meetings, and gate shows. Currently Boston has three small and medium convention sites: the John B. Hynes Veterans Memorial Convention Center, the World Trade Center and the Bayside Exposition Center. Together, these facilities have a combined full capacity of over one million people per year. In addition, the Massachusetts legislature has authorized the development of a new 1.7 million square-foot convention and exhibition center in Boston that will provide facilities suitable for large national conventions. In 1998 there were 300 events - meetings, conventions, and expositions - over the course of the year in greater Boston, ranging in size from regional meetings with 500 guests to international conventions of 17,000 visitors. Also in 1998 there were: 40 expositions; 64 college commencements which took place in a six week period in May and June; and 19 national associations which held their annual meetings in Boston. Also in 1998 there were 22 “city-wide conventions”; these are defined as events that would each use over 2,000 hotel rooms on the peak night. Projections for 1999 were for 20 city-wide conventions.

On November 17, 1997, the Massachusetts legislature authorized the joint development by the city, acting through the BRA, and the Massachusetts Convention Center Authority (MCCA) of a Boston Convention and Exhibition Center (BCEC) to be constructed on a 60 acre site on Summer Street in South Boston in the South Boston Seaport District. The 1.7 million square-foot facility, which is expected to open for operations in fiscal year 2004, will include approximately 600,000 square feet of contiguous exhibition space on one level, 200,000 square feet of meeting space and a 50,000 square-foot ballroom as well as banquet and lecture halls, and indoor underground parking. The BRA is responsible for site acquisition, now complete, as well as for site preparation, demolition and environmental remediation, which are now underway. The BRA will subsequently convey the site to MCCA in 2000 for a nominal consideration. The design of the BCEC is now underway. It will be constructed and managed by MCCA. The total cost of the convention center is projected at approximately $695 million, including site acquisition and preparation costs to be borne by the city up to $157.8 million and construction costs of $537.2 million to be borne by the Commonwealth. See “The Economy - Large Public Sector Projects” - “Boston Convention and Exhibition Center” in the Official Statement for a more detailed discussion of the project.

In addition, consideration is being given to a plan by the Boston Red Sox to replace Fenway Park, their baseball stadium, with a new facility at the current site and expanded to include adjacent areas. This plan is currently under review for appropriate approval including siting, design, and financing, however no decision has yet been reached.

Hotel Market

Boston's favorable hotel market over the past eight years has stimulated considerable new development. The number of hotel rooms in the city rose from 6,907 in 1980 to 12,136 as of July 1, 1997, an increase of 76%. Between July 1, 1997 and December 1999 eight new hotels and four expansion projects were completed, adding a total of 1,537 rooms. The largest hotel completed in 1998 was the Seaport hotel, with 427 rooms, adjacent to the World Trade Center on the South Boston waterfront. In 1999 three new hotels and one expansion were completed: the Wyndham Boston Hotel, a 362-room renovation of the former Batterymarch building at 89 Broad Street; The Club by Doubletree near the Bayside Expo Center with 212 rooms; the rebuilding of the Airport Hilton in East Boston with 87 net new rooms; and the 38-room expansion of the Bostonian Hotel adjacent to the Faneuil Hall Marketplace.

As of December, 1999 four new hotels, representing 573 new rooms, were under construction, three of which were conversions of old buildings: a conversion of 15 Beacon Street into 63 boutique rooms; a conversion of the former Don Bosco High School into The Club by Doubletree with 268 rooms; a new Ritz Hotel at the Millennium Place, downtown, with 150 luxury suites; and the Best Western "roundhouse" conversion in the South End into a 92-room hotel. Applications to construct fifteen new hotel projects, representing a total of 5,591 rooms, have been filed with the BRA and are currently in the approval process. In addition, several other hotel projects have been proposed, but have not yet initiated the approval process.

Between 1991 and 1996, average annual occupancy rates grew steadily from 65.4% to 78.4% and average daily room rates rose steadily from $108.29 to $145.91. For 1997 occupancy grew by 1.8% to 79.6% while room rates grew by 12.2% to $162.72. In 1998 Boston's hotel occupancy rate was 78.6% and average room rate was $176.59. Total room sales were up by 1.0%, however, despite the small decline in the occupancy rate, because the total supply of hotel rooms increased. During the first eleven months of 1999 room occupancy was 79.0% compared to 80.7% through the first eleven months of 1998 while the room rate was $190.76 in 1999 compared with $177.53 in 1998. Total hotel room night sales were up 1.6% over the same period in 1998 because of the addition of net new supply.

TRANSPORTATION

The city is a major national and international air terminus, a seaport and the center of New England's rail, truck and bus service. The city is served by three limited-access interstate highways which connect it to the national highway system: U.S. 90 (the Massachusetts Turnpike), which leads westward from downtown Boston to the New York State border; U.S. 95, the East Coast's principal north-south highway, which connects Boston to Portland, Maine to the north and New York City and Washington, D.C. to the south; and U.S. 93, another north-south highway, that extends from just south of the city to New Hampshire and Maine. The city is also served by two national railroads, Amtrak and Conrail, a regional rail carrier, Boston and Maine (a subsidiary of Guilford Transportation Industries), and Bay Colony, a local carrier.

Transportation planning includes both major highway and mass transit programs. Federal transportation legislation has enabled the Massachusetts Bay Transportation Authority (MBTA), which provides commuter rail, subway, local bus and express bus services to 78 cities and towns in eastern Massachusetts, to receive approximately $3.8 billion between 1965 and 1995. Transportation planning for mass transit facilities in the city is mainly under the auspices of the MBTA. In addition to federal money, since 1983, the MBTA has undertaken capital projects in the amount of $3.5 billion, most of which comes from state bond issues. The MBTA in the federal fiscal years 1992-1998 received a total of approximately $1.040 billion in Federal Transit Administration (FTA) capital funds.

The MBTA's current capital program includes a variety of expansion and rehabilitation projects; its five year program anticipates spending $300 million annually. MBTA capital funds go toward relocating and extending rapid transit and commuter rail lines. In addition, MBTA capital funds go toward the ongoing improvement, renewal and modernization of equipment, facilities, service utilities, tunnels and bridges. MBTA capital program projects are funded through the federal government and MBTA bonds and certificates of participation.

Highlights of the capital improvements program include fleet improvements and infrastructure improvements. The MBTA is pursuing a vigorous program of renewing and upgrading the bus fleet, procuring new light-rail vehicles, and procuring new commuter rail coaches and their locomotives. As for infrastructure improvements the MBTA has been pursuing system-wide improvements to power substations and power cables as well as improvements to signal systems and system-wide radio communications facilities. Track improvements include the continuous renewal and upgrading of over 350 miles of commuter rail, light rail and heavy rail track. Other improvements include modernization of maintenance facilities, renewal and repair of non-revenue equipment, safety improvements, rehabilitation of tunnels and bridges, and installation of vent shafts on the Green and Red lines. As for station modernization, an aggressive program to modernize the Blue and Green lines for compliance with Americans with Disabilities Act (ADA) regulations is underway. General upgrading of stations is also ongoing, system-wide. A variety of specific fixed capital projects follows.

Work is underway on the MBTA's North Station Transportation Center Project, which will result in a major expansion and modernization of the North Station complex. This project is a cooperative venture of the MBTA, the City of Boston, and the developer of the Fleet Center sports arena and commercial complex. Construction of an underground parking garage and commuter rail terminal improvements have been completed. The new subway super-station for the Orange and Green Lines as well as the relocation of the existing elevated light rail Green Line viaduct to an underground station-tunnel complex, began in the fall of 1995, is underway. When completed, this structure will allow for underground transfer between Green Line, Orange Line, and commuter rail stations.

The MBTA's South Station Transportation Center project, which includes new inter/intra city rail and bus facilities, a fully modernized rapid transit station, and a parking garage above the existing rail terminal, is complete and open. Private development to be developed on air rights above through a cooperative project between the BRA and the MBTA is being considered.

The MBTA began limited commuter rail service to Worcester and Framingham in the fall of 1994 and full service will be permitted when track and signal work is complete. Design and construction of four new intermediate stations in Ashland, Southborough, Westborough, and Grafton are in progress.

The MBTA is nearing completion on the restoration of commuter rail service on the Old Colony Commuter Rail line which will provide commuter rail service to several of Boston's South Shore suburbs. Service has been restored on the Plymouth and Middleboro/Lakeville branches which opened on September 29, 1997. Design work on the Greenbush branch began in 1997 with service anticipated in the next few years. In total, 22 new stations will serve a projected 30,000 passenger trips per day. About 80% of the cost of the Plymouth and Middleboro branches component is being funded by the federal government. MBTA bond funds will pay for the remaining share.

In addition, the MBTA received $136 million in bond authorization in the 1996 Transportation Bond Bill for the extension of commuter rail service to the Fall River/New Bedford region. The total estimated cost of this project is $410 million, with additional bond authorization expected in future transportation bond bills.

The South Boston Piers Transitway/Electric Trolley Bus Project is a $413 million long range plan to connect South Station with the proposed new Federal Courthouse at Fan Pier and the World Trade Center and, eventually, the completion of a 1.5 mile underground transit tunnel connecting South Station to Boylston Street Station. Construction, to take place in two phases, began in the fall of 1995 with revenue service expected in 2003. The federal government is expected to fund 80% of the cost of this project with the remaining 20% to be paid with the proceeds of MBTA bonds.

The MBTA is completing planning of trackless trolley service on Washington Street between Dudley Square and downtown Boston. Service will operate in reserved lanes using 60 foot-long articulated low door buses. This $40 million project will be funded with state funds. The design stage was completed in 1999 and construction should begin in 2000. This project, when combined with the South Boston Piers Transitway through a tunnel between South Station and Boylston Station (phase three) in the year 2008 will be know as the Silver Line.

Since 1991, Amtrak has spent $1.1 billion towards a multi-year high-speed rail infrastructure project of $1.5 billion, to upgrade the rail corridor between Boston and New York permitting better ride quality, faster speeds, and greater capacity for rail users. A key component of infrastructure upgrades is electrification of the remaining segment of the Northeast Corridor rail line between New Haven and Boston, scheduled for completion in 1999. Massachusetts Electric Construction Co. and J.F. White, two Boston firms, are major members of the team implementing the electrification work. Amtrak has awarded a contract to acquire 15 high-horsepower electric locomotives and up to 20 high-speed trains which, when combined with all other infrastructure improvements, will reduce rail travel time from downtown Boston to downtown New York City to three hours, which is competitive with air travel. The equipment contract also included construction of three new maintenance facilities servicing the trains and locomotives; one of these facilities, completed in 1999, is located in Boston at Southampton Yard. Bombardier/GEC ALSTOM won the contract to build Amtrak's new high-speed equipment, using manufacturing sites in Barre, Vt., and Plattsburgh, N.Y. Amtrak expects to generate significant revenue from high-speed rail service and, based on ridership and revenue projections, was able to secure private financing for 100% of the cost of the new high-speed trains. Congressional appropriations under the Northeast Corridor Improvement Program pay for infrastructure work and maintenance facilities. The whole system will be up and running in 2000. Beginning in early 2000, Amtrak introduced fully electrified *Acela Regional* service between Boston and New York. The trip on *Acela Regional* between Boston and New York will be reduced to under four hours. *Acela Express*, which will offer travelers a three-hour trip between the two cities, is scheduled to begin later in 2000.

Water transportation has also become a significant factor in transportation with the Boston Harbor. Currently seven operators provide annual water transit services to approximately 1.5 million riders with ambitious plans for future expansion in the planning stages.

See "Large Public Sector Projects" for a description of the depression of the Central Artery and the construction of a third tunnel under Boston Harbor, two other significant transportation projects in the city.

SEAPORT AND AIRPORT

The Massachusetts Port Authority (Massport) was created by the state legislature to develop and manage the city's major air and sea transportation centers and the Tobin Memorial Bridge over the Mystic River. Massport is financially independent, and the city is not responsible for any debt or other obligations incurred by Massport. Heavy use of Boston Logan International Airport (Logan Airport) and the Port of Boston has compelled significant expansion of both facilities. Massport's net investment in its facilities through June 30, 1999 exceeded $1.8 billion, consisting of $1.3 billion invested in airports and $500 million invested in the Tobin Bridge, maritime development and other capital spending.

The Port of Boston serves the six-state New England region and beyond as a natural deep-water berth, and provides access to world ports as well as feeder service several times weekly to Halifax, Canada and the Port of New York. The city's port activity includes handling bulk and general cargo, providing ship repair supply services, offering customs and international trading services, providing storage facilities and other commercial maritime services. Port tonnage fell from the 1950s through the mid 1980s as a result of changes in transportation technology and in the regional economy. In 1990, according to the U.S. Army Corps of Engineers, the Port of Boston ranked as the 21st largest American seaport by total tonnage shipped and as the 18th largest American seaport by foreign tonnage shipped. During fiscal 1999 the container terminal in Boston handled 83,500 containers.

The Port of Boston is now a major cruise port which hosted a record 64 cruise ships in fiscal 1999, carrying 109,000 passengers. The cruise port mainly runs from May through October.

In 1996, the BRA and Massport produced a Seaport Economic Development Plan for Boston Harbor which provides policies and guidelines for future development planning along Boston's waterfront. The plan is currently being implemented.

In 1999, Logan Airport was served by 39 domestic and 20 international airlines. In calendar 1998, Logan Airport, served a total of 26.7 million passengers. A 1998 report showed that Logan was the most active airport in New England, the 17th most active in the United States and the 27th most active in the world, according to the Airports Council International (ACI).

Logan Airport also plays an important role as a center for processing domestic and international air cargo. According to ACI, in 1998 Logan Airport ranked 19th in the nation in total air cargo volume. Between fiscal 1995 and 1999 the total volume of air cargo handled at Logan Airport grew by 1.9%. In fiscal 1999 total combined cargo and mail volume was over 949 million pounds.

TABLE 12. BOSTON BUILDING PERMIT REVENUES AND ESTIMATED POTENTIAL CONSTRUCTION ACTIVITY LAST TEN FISCAL YEARS, 1990-1999

Year	**Building Permit Revenues** (1)	**Estimated Potential Construction Activity** (2)	**Estimated Potential Construction Activity Adjusted For Inflation** (3)
1990	8,119,487	955,233,793	1,222,839,731
1991	6,689,380	786,985,833	952,811,081
1992	9,136,207	1,074,847,882	1,279,091,021
1993	8,832,324	1,039,096,908	1,190,959,656
1994	9,039,951	1,063,523,647	1,205,465,280
1995	7,629,395	897,575,882	989,037,729
1996	11,777,653	1,385,606,235	1,487,262,920
1997	9,199,877	1,082,338,471	1,123,644,173
1998	14,757,703	1,736,200,395	1,765,610,332
1999(4)	11,404,006	1,341,647,713	1,341,647,713
Total	96,585,983	11,363,056,759	12,558,369,636
Annual Average 1990-1999	$ 9,658,598	$ 1,136,305,676	$ 1,255,836,964

(1) Building permit revenues in current dollars.
(2) Potential construction activity estimated by dividing permit revenues by 0.85%, the midpoint between permit fees calculated at 0.7% of the first $100,000 estimated value of development cost and 1% for the remainder of development cost.
(3) Estimated potential construction activity adjusted to January, 1999 constant dollars (CPI-U).
(4) Only partial data are available for Fiscal 2000 so data are not in the table. Based upon building permit revenues from July 1, 1999 through November 30, 1999 the estimated annual building permit revenue would be $26.2 million, resulting in an estimated annual construction potential of $3.087 billion. Since this is based on less than five months of data and is subject to major seasonal variation the data are not reliable enough to put in the table.

Source: City of Boston Auditing Department and Boston Redevelopment Authority's Policy Development and Research Department.

In 1998, Massport projected that it would spend about $2.5 billion during fiscal 1995 through 2005 for ongoing capital improvements to Hanscom Field, Logan Airport, Tobin Memorial Bridge and the port facilities, and for improvements and major maintenance at various Massport properties. Massport currently expects to finance these projects with a combination of bond proceeds, passenger facility charges, federal grants and internally generated funds. The present plan to add a new runway at Logan airport is in preliminary stages of consideration and review and a further description is given in the section on "Large Public Sector Projects".

CONSTRUCTION ACTIVITY

Since 1960 the public and private sectors have carried out a major expansion of capital construction and investment activity. Private commercial development investment has added approximately 30 million square feet of office space to the physical inventory of the city since 1960, eight times the amount built in the previous 35 years.

Table 12 sets forth the estimated potential construction activity in the city from fiscal years 1990-1999, estimated as indicated in the notes to the table. It should be noted that the issuance of a building permit and payment of a fee do not necessarily result in construction activity.

Revenue from building permit fees during fiscal 1999 indicated that the estimate of total potential construction activity was $1.34 billion. Revenue from building permit fees in fiscal years 1990 and 1991 indicated that total estimated construction activity dropped below a billion dollars in the two years. It increased in fiscal 1992, 1994, 1996 and 1998 after decreasing in fiscal years 1993, 1995, and 1997. In fiscal 1999, building permit revenues reached an estimated potential construction activity of approximately $1.34 billion. Data from July 1, 1999 through November 30, 1999 (preliminary fiscal 2000) showed projected building permit revenues at an estimated annualized sum of $26.2 million, resulting in a preliminary fiscal 2000 potential construction estimate of $3.09 billion.

LARGE PUBLIC SECTOR PROJECTS

Through the year 2004 the Boston metropolitan area will continue to be the site of several major public sector projects. In addition to the BCEC Project, (See "Tourism" above) these projects include the depression of the Central Artery, the section of U.S. 93 that runs through downtown Boston, which is the key six-lane elevated interstate highway that carries traffic through the city, and the construction of a four-lane tunnel (the Ted Williams Tunnel) under Boston Harbor (together, the "Transportation Projects"). At present, the Central Artery connects with the Sumner and Callahan Tunnels, two two-lane tunnels under Boston, which link downtown Boston with Logan Airport and points north. The Ted Williams Tunnel was completed in late 1995 and opened for limited use until the balance of the Interstate 90 extension under the Fort Point Channel is completed.

The Transportation Projects, which are intended to improve traffic flow within the city, are under the control of the Commonwealth. It is estimated that the Transportation Projects employed about 5,000 on-site workers and 10,000 auxiliary workers during the late-1990s (the peak years of construction). The Transportation Projects are now estimated to cost $12.2 billion (including inflation and recent project changes). According to current estimates, federal funds will cover approximately 69% of this cost, and the Commonwealth will cover the remaining 31%. On June 9, 1998 President Clinton signed into law the Transportation Equity Act for the 21st Century (known as TEA-21). This Act establishes federal transportation funding amounts for the period between FFY 1998 and FFY 2003. Under TEA-21, the annual highway apportionment for transportation needs, throughout the Commonwealth, will average approximately $529 million per year. Actual funds for each year will depend on the level of revenue coming into the Highway Trust Fund. Authorizations are subject to annual appropriations by Congress. The Commonwealth received another authorization by Congress in 2000. The Commonwealth's contribution over the life of the project is expected to be approximately $3.4 billion. It is expected that appropriations will be made in annual increments by the Commonwealth as the work progresses.

The Massachusetts Port Authority has developed a long range capital program of approximately $2.9 billion for improvements at its facilities, most of which are located in the city. The capital program includes a major modernization of Logan Airport, currently underway, which will include a new double-decked roadway system, a new 3,150 car parking garage, a new public transit terminal, improved walkways, major terminal renovations, a new 600-room hotel, and a new sign system. This capital program also includes non-Logan improvements and privately-financed investments at Massport facilities.

The Massachusetts Water Resources Authority (MWRA), an independent state authority, is completing construction of one of the largest wastewater treatment facilities in the nation (the "Treatment Facility Project"). This project, which is being undertaken pursuant to a federal district court order, is scheduled for completion in the near future as part of MWRA's capital improvement program with a cost of approximately $3.919 billion (1999 dollars). Through June of 1999, approximately $3.572 billion of work had been completed. The project is intended to bring wastewater discharges in Boston Harbor into compliance with federal and state requirements. It is being funded through state and federal grants and loans and the issuance by MWRA of revenue bonds backed by rates and charges paid by users. Such rates and charges are expected to continue to increase each year, dictated in large part by increased debt service costs in connection with financing its capital program, and are expected to have a financial impact on the local bodies served by MWRA, including the Boston Water and Sewer Commission (BWSC). In addition to the Treatment Facility Project, the MWRA is planning to spend $2.340 billion on other wastewater and water system improvements over the next ten years to 2009. The largest of these is the Metrowest Water Supply Tunnel project. None of these improvements will be located in Boston but should nonetheless provide major improvements in the system infrastructure that serves the city.

The city is not directly responsible for the costs of any of the above-described projects, although the BWSC, which pays approximately 30% of all MWRA rates and charges, is expected to bear a portion of the cost of the MWRA capital program through increased user fees. The city is currently negotiating with the Commonwealth to receive mitigation payments for any city services (such as fire and police) which may be required to support the Transportation Projects. No such services are expected to be required for MWRA projects.

The Boston Housing Authority (BHA) is currently undertaking major revitalization initiatives at two of its public housing developments: Mission Main, in the Mission Hill neighborhood of Boston, and Orchard Park, in Roxbury. The BHA received two HOPE VI grants from the Department of Housing and Urban Development, totaling $80 million, to implement a new approach to public housing financing, incorporating innovative partnerships with public and private entities which will leverage additional development funds. These initiatives are designed to revitalize not only BHA sites, but the surrounding neighborhoods as well.

Massport is currently proposing to build a new runway at Logan Airport to enhance the efficiency of operations and to relieve reported flight delays. This proposal is now undergoing environmental review. In the New England region, capital and operating improvements at the five other regional airports have resulted in capacity upgrading and more efficient usage of air traffic operations.

EMPOWERMENT ZONE DESIGNATION

On January 13, 1999, the city was designated an Empowerment Zone (EZ) by the U.S. Department of Housing and Urban Development. This makes Boston eligible to share in proposed federal grants and tax-exempt bonding authority to finance sweeping revitalization and job creation programs over the following ten years. The ten-year EZ designation brings with it $130 million in tax-exempt bonding authority for qualified projects and $100 million in grants. Boston is expected to receive $10 million per year for ten years. To date $3 million was approved by the Federal government for year one and $3.6 million was approved for year two. Goals of the EZ include: job creation, business development, home ownership opportunities, affordable housing creation, transit system improvements, computer technology training, and job training and educational efforts. Over the life of the EZ, millions of dollars of investment is expected to be leveraged locally by organizations, including: public institutions, companies, educational institutions, hospitals, philanthropic groups, utilities, and others. Boston's EZ will also give the city priority for other federal programs. The EZ, wholly within Boston, encompasses 5.8 square miles, running north to south right through the center of the city, including parts of the neighborhoods of South Boston, Downtown, the South End, Roxbury, Jamaica Plain, Chinatown, North Dorchester, and Mattapan. The EZ contains 57,640 residents (roughly 10% of the city's population), has an unemployment rate of 16.1%, and has 43% of the adult (age 25+) population with less than a high school diploma.

Boston had filed an empowerment zone application in 1994 but instead received Enhanced Enterprise Community (EEC) designation on December 21, 1994 by the Department of Housing and Urban Development. As an EEC, Boston receives Economic Development Initiative (EDI) grants which are to be used only within the EEC and are intended to complement and be used in concert with Section 108 Loan Guarantees. EDI grants may be used to write down interest rates on Section 108 loans and to establish a loan loss reserve. The EDI grant makes the city eligible for matching Section 108 funds which can be used as capital improvement loans for commercial or industrial projects that either produce jobs of which 60% are for low and moderate-income residents, or aid in the prevention or elimination of slums or blight, or urgent community needs.

As part of the EEC designation, the city was awarded $2.95 million from Title XX Social Service Block Grant (SSBG) funding. SSBG funding is used to conduct human service programs that will help connect residents to jobs. These programs include adult job skills training; adult education, including English as a Second Language (ESL), General Equivalency Diploma (GED), Adult Basic Education (ABE); alternative education for "youth at risk"; and expansion of Day Care availability. Finally, EEC designation enables development projects or human service programs impacting the EEC to take advantage of certain tax benefits and priority in other Federal funding programs.

In November 1995 the Boston Empowerment Center (BEC) was created as a mechanism to provide small businesses a comprehensive array of financial and technical assistance to help them start and stay in business. The BEC/One Stop Capital Shop provides information and services in many areas, including business start-up assistance, acquisition, loan packaging assistance, help with business plan development, access to a wide-range of capital resources, as well as assistance with marketing plans, government procurement, international trade, technology transfer, market diversification, and language translation. From November 1995 through December 1999, over 4,000 clients have been served and over $70 million of financing has taken place through this resource.

EEC and EZ resources have facilitated business development financing. Anchor projects totaling over $40 million include: $3 million to the Henry Miller Manufacturing Company; $6.2 million for the South End Community Health Center; $15.5 million for the redevelopment of Dudley Center, four buildings in Dudley Square; $6.8 million for Grove Hall Mall; $5 million for CrossTown Center; $3 million for North Coast Seafood and Commercial Lobster; and $540,000 for Merenguw Restaurant on Blue Hill Avenue. In addition, Boston's EEC has utilized the HUD 108/EDI program to maximize the number of newly created jobs for EEC residents. Twelve 108/EDI projects with $86.7 million of investment will produce or retain over 800 new jobs with 60% going to EEC residents.

In other financing programs, the Boston Local Development Corporation (BLDC) has loaned $1.2 million to businesses in the EEC, and private banks have provided $1.7 million in leveraged financing. Another five new businesses are currently planning to move into the EEC through marketing efforts of the BEC staff. Also, five EEC neighborhood business districts have been designated participants in the Main Streets program, which assists businesses in helping become more competitive. Finally, achievements in human services initiatives are evident as of Spring of

1999. The majority of the $3 million in Title XX Social Services Block Grant awards was spent on adult basic education courses and job training. In the EEC at large, a total of 392 jobs were created or retained, $304 thousand in technical assistance moneys were expended, 250 EEC residents participated in skills training, 100 EEC residents took ESL, GED, and ABE education courses, 1,450 children benefited from day care quality improvement grants, and 310 additional day care slots were created. Many other human services goals have been met, too numerous to identify, which have benefited the homeless, youth, public housing tenants, child-care services, and alternative education.

Housing development within the EEC has also produced results. The modernization of Orchard Park and Mission Main public housing projects are both currently in phased construction schedules. Single family homeowner rehabilitation projects for seniors and through the HOMEWORKS program have begun. Multi-family housing development has produced 14 projects with a total of 304 units with 12 additional projects and 196 units in the pre-development stage.

MUTUAL FUNDS TAX LEGISLATION, 1996

In August of 1996, former Governor Weld signed legislation which changed the corporate tax structure for mutual fund service corporations (a sub-set of the larger set of financial services firms) operating in Massachusetts. The new law, which is to be phased in over a three year period, calls for taxes to be applied only on sales to investors who are Massachusetts residents, a change from the previous law that applied the tax to both in-state and out-of-state investors.

The new law also did away with the previous three-factor formula that calculated the tax based on a company's sales revenue, payroll, and property values. The new single factor apportionment law calculates taxes based exclusively on sales.

To qualify for treatment under the new legislation, mutual fund corporations in the state must retain 100% of their 1996 employment level, and must increase jobs at least 5% in each of the next five years. In the sixth year, all mutual fund corporations whose employment level is 125% of their 1996 level will qualify for treatment under the new law.

The mutual funds business is the fastest growing sector of the $7.5 billion financial services industry in Massachusetts. In Boston, financial services accounts for some 47,000 jobs and a payroll of $3.2 billion and generates jobs in supporting fields like telecommunication, computer technology, printing, advertising, law, and accounting.

OFFICE MARKET AND NEW DEVELOPMENT

The city currently has approximately 50 million square feet of office space, of which 37.8 million is Class A (the most expensive category), and 12 million is Class B or C. From 1977 through 1983, local office occupancy surveys reported a consistent decline in vacancy rates, reaching 2.0% in 1983. In the 1983-1990 period a large new supply of office space was built, but even with healthy absorption new supply outran total demand. Vacancy rates at year-end 1990 were 14.6% after an annual absorption of 583,000 square feet, while 1.9 million square feet of new office space was added. In the 1990-1993 period, new supply still outpaced demand sending the vacancy rate up to 16.1%. Since that time, a quickening economy and a period during which almost no new office space has been added in the city has driven vacancy rates down dramatically.

By year-end 1998 Boston's overall vacancy rate according to CB Richard Ellis was reported to be 3.3%, the lowest of the top 20 downtown markets in the country, Boston's Class A vacancy rate was even lower, at 1.5%. In 1999 two office projects were completed: the 400,000 square foot Lafayette Corporate Center, the renovation of a former downtown retail mall into office space; and the renovation of 220,000 square feet at 255 State Street. The overall Boston vacancy rate as of third quarter 1999 according to Meredith & Grew was 3.4% percent which is stimulating a lot of new development activity.

As of December 1999 three major office projects with 2.2 million square feet of new office space are under construction, and are scheduled for completion by early 2002: the World Trade Center East office development, a 500,000 square-foot building located in the South Boston waterfront area; 10 St. James at the former Greyhound bus terminal site, a 790,000 square-foot building, and; 111 Huntington Avenue at the Prudential complex, an 874,000 square-foot tower. Three major renovations are also underway which will add just over 1.1 million square feet of space: the 600,000 square-foot renovation and expansion of the old Sears building in the Fenway known as Landmark Center; One Summer Street at Macy's, a 400,000 square-foot renovation of retail space into office use; and 121,000 square feet at 343 Congress St.

Table 13. Comparative Office Vacancy Rates
20 Largest Downtown Office Markets as of December 31, 1998

City	Vacancy Rate	City	Vacancy Rate
Boston	3.3%	Phoenix	10.2%
San Francisco	3.5	Chicago	10.6
Manhattan, Midtown.	3.9	Cleveland	11.1
Seattle	4.4	Houston	11.5
Minneapolis-St. Paul	4.7	Atlanta	14.1
Washington, D.C.	5.5	Philadelphia	14.5
Cincinnati	6.7	Los Angeles	15.5
Manhattan, Downtown	7.7	Detroit	16.5
Baltimore	9.4	Kansas City	17.2
Denver	9.9	Dallas	31.9
	National Average (1)	**8.8%**	

(1) National Average is based on 48 U.S. cities (downtowns) from the CB Richard Ellis Office Vacancy Index.
Source: CB Richard Ellis Office Vacancy Index, December 31, 1998.

In addition, there are several large neighborhood office projects on-going: Renaissance Center, a renovation of a 200,000 square foot office building near Ruggles Station on the Orange Line; Brighton Landing (New Balance) which includes 400,000 square feet of office space; and at least four buildings in Dudley Square which are undergoing a combination of new construction and preservation, including the relocation of the Massachusetts Department of Public Health.

For completion later in 2002 and beyond, six large office projects are in the planning stages: 131 Dartmouth St., a 350,000 square foot mid-rise office building in the Back Bay; 470 Atlantic Ave., a 330,000 square foot renovation and expansion on the waterfront; Two Financial Center, a 275,000 square foot building behind One Financial Center; World Trade Center West, a 500,000 square foot building on the South Boston waterfront; a 1 million square foot building known as One Lincoln at the Kingston-Bedford garage site; and a 580,000 square-foot building at 33 Arch Street behind the old Woolworth's These six buildings, if fully completed, would add another 3 million square feet to the city's office supply inventory the near future.

RETAIL MARKET

As of 1997, the date of the last U.S. Economic Census, Boston was within the ninth largest metropolitan retail market in the nation, consisting of the city plus the Massachusetts metro areas of Lowell, Lawrence, Salem and Brockton. Of the approximately 10 million square feet of retail space in the city, approximately six million square feet are located in downtown Boston and Back Bay. About 2,262 retail establishments were located in the city in 1997 and had an estimated total sales of $4.3 billion according to the U.S. Census of Retail Trade. According to projections in Sales and Marketing Management's "Survey of Buying Power", retail sales in the Boston metropolitan area increased in 1998 to $39.9 billion, a 31.6% rise from sales in 1992. Retail sales in the city for all of 1998 reached $4.7 billion, which showed a rise of only 19.3% from 1992 without accounting for inflation.

Recent major retail projects in downtown Boston include Borders Books, Marshall's, Sym's and the Lafayette Corporate Center in Downtown Crossing as well as the enlarged Prudential Center retail mall and the new Niketown building in the Back Bay.

Table 14. Massachusetts, Metropolitan Boston, and Boston Retail Sales, 1992-1998
(in thousands, not adjusted for inflation)

	Massachusetts		Metropolitan Boston		City of Boston	
	Retail Sales	**% Change**	**Retail Sales**	**% Change**	**Retail Sales**	**% Change**
1992	$47,450,983		$30,341,790		$3,953,909	
1997	$58,578,048		$33,638,529		$4,255,687	
1998	$62,572,826		$39,928,536		$4,715,870	
	6-Year Change	31.9%	6-Year Change	31.6%	6-Year Change	19.3%

Source: U.S. Department of Commerce, Bureau of the Census, "Census of Retail Trade" for 1992 and 1997, and Sales & Marketing Management, Survey of Buying Power for the 1998 estimate. Compiled by Boston Redevelopment Authority's Policy Development and Research Department. Metropolitan area is the Boston-Lowell-Lawrence-Brockton Metropolitan area (PMSA).

In the neighborhoods there are now 19 neighborhood business districts selected for The Main Streets Program. This program is a public-private initiative of the City of Boston established in 1995 to revitalize neighborhood commercial districts through locally established organizations. The program has generated, as of June 1999, 280 net new and expanded businesses, created 2,181 net new jobs, and included 100 storefront improvement projects. These projects have leveraged $150 million in private sector investment with $5.5 million of public sector investment. Also of importance are the supermarket developments that have taken place throughout Boston's neighborhoods, a solid sign of investment in the inner-city; nine new supermarkets and two expanded supermarkets are completed and several more are underway.

As of December, 1999 there were two major retail developments in construction, including 200,000 square feet of retail and theater space at Millennium Place in Lower Washington Street, and over 200,000 square feet of retail and theater space at the Landmark Sears building in the Fenway. In the Roxbury/Dorchester/South End neighborhoods, several recent developments are worth mentioning: completion of the Home Depot's 114,000 square-foot store at the South Bay Center Mall open 24 hours a day, which is the first inner-city store for the company; the pending Grove Hall supermarket complex with over 50,000 square feet of retail space; four buildings in Dudley Square with considerable retail space; and the Crosstown commercial complex in the South End, in planning, which will have retail and theater space serving the neighborhoods.

INDUSTRIAL MARKET AND RECENT DEVELOPMENTS

Boston has just over 21 million square feet of industrial space within the city limits. As of May 1998, according to the BRA, over 10.2 million square feet of industrial space was surveyed and the vacancy rate was found to be 35.7%, with over 3.6 million square feet unoccupied. The average rent for quality industrial space was estimated to be in the range of $6.00 per square foot (triple net). In 1994, there were 3.9 million square feet of industrial research and development space in the city, which was 16% vacant with 619,000 square feet available. The average rent was estimated to be $11 per square foot.

According to information from the Economic Development and Industrial Corporation (EDIC), 5.5 million square feet were acquired and/or rehabilitated in the city for industrial use from 1983 through 1991. Among these projects were: the multi-million dollar expansions by Teradyne, Inc.; EDIC's Marine Industrial Park, renovation of the former Schrafft's factory in Charlestown for office tenants; private investments in rehabilitation for industrial use of the Stonybrook Commerce Center; the Haffenreffer Brewery in Jamaica Plain; and, the Howden Sirocco plant in Hyde Park.

From 1992–1995, a Cambridge-based biotechnology firm, Genzyme Corporation, constructed an $85 million biopharmaceutical manufacturing plant in Allston. Genzyme has plans to build further manufacturing, research and development and headquarters facilities on the site during the 1990s.

Certain companies were forced to lay off employees in the mid-1990s because of business strategies and downsizing efforts. For example, Digital Equipment Corporation ("DEC") closed its Roxbury plant in late 1993 and Stride Rite Corporation closed its plant in Roxbury in 1997. These plant closings will have eliminated a total of 350 manufacturing jobs, representing about 1.0% of the city's industrial jobs. In 1995, H.P. Hood decided to consolidate its operations in the suburbs and close its Charlestown Plant.

The city purchased the former DEC building in Roxbury in late December 1994. The facility houses the Boston Technology Development Center (BTDC). The BTDC opened an Innovation Center operated by the Massachusetts Biotech Research Institute (MBRI). The Innovation Center can be thought of as a "super incubator" which includes four major components: a physical incubator with shared conference and reception facilities; a relationship with venture capital funding; a technology transfer office which helps locate technologies with commercial potential; and a comprehensive education and training program. The MBRI incubator space is currently fully occupied with spin-off firms. The BTDC is providing many benefits to the neighborhood and citywide including construction jobs, permanent jobs, education and training programs, public school seminars, youth education, and neighborhood workforce development programs. Over $20 million in venture capital funding is supporting the new companies that are housed at the BTDC—$5 million in Federal funds awarded to the project leveraged these private funds. Full occupancy of BTDC was achieved in 1998 with the tenancy of HiQ Computers, which took the final 30,000 square feet for the assembly and repair of computer systems. In 1999 the Crosstown site was planned to be developed into a shopping center and theater complex. HiQ Computers will be relocated, possibly to BMIP where they are now looking. The Boston Empowerment Center (BEC) office and MRBI will also be relocated.

There were seven projects completed in the 1995-1997 period: the Advanced Electronics expansion to 110,000 square feet; the expansion of the Boston Freight Terminal in Marine Industrial Park; the American Engineered Components move from Cambridge to Boston; the Zoom Telephonics building doubling in size to 150,000 square feet; Boston Ship Repair's expanded business in Dry-Dock 3 at BMIP; The Harry Miller Company development of 36,000 square feet of space with assistance in Boston's EEC; and, the completion of the New Boston Seafood Center, housing seven seafood companies in a 70,000 square-foot state-of-the-art facility in the Boston Marine Industrial Park (BMIP).

In 1999 there are a variety of industrial projects active. In BMIP there is continued success with the effort to keep a prosperous seafood industry on the Boston waterfront with the announcement of a pending development. North Coast Seafoods is planning a 60,000 processing-distribution-office facility with future plans to expand on an adjacent site. In the South Boston Seaport District a major venture is planned with port-related activity. An International Cargo Port has started as a 400,000 square-foot, $50 million investment by the private sector, which will service intermodal (airport, seaport, rail, and truck) freight-handling tenants scheduled to open in July 2000. Finally in South Boston, the ongoing convention center project has displaced 70+ businesses, many of which are industrial uses, and the result has been an extremely "tight" industrial market in South Boston. The BRA is working to relocate firms in buildings within the footprint to insure a smooth transition. See "Large Public Sector Projects," above.

Other industrial projects are also in motion in 1999 around the city. New Balance athletic shoe company has begun construction to expand their office headquarters and manufacturing facilities in Boston's Brighton neighborhood where they will be constructing 100,000 square feet of manufacturing and 100,000 square feet of office space. Also, of note is Teradyne, Boston's second largest manufacturing employer, which has recently completed expansion of a substantial amount of new manufacturing space around the city. In the Newmarket district industrial area the BRA is considering implementing an economic development plan with industrial uses on the Incinerator site and construction of a surface parking lot and structured parking facility adjacent to that site. The former Hood plant in Charlestown has been the site of some freight forwarder uses moving off of Logan airport with several hundred jobs. Several additional air freight firms are now interested in a South Boston location.

HOUSING STOCK, HOUSING VALUES, AND DEVELOPMENT

The U.S. Bureau of the Census reported in April 1990 that the city's housing stock consisted of 250,863 units. From 1980, the date of the previous decennial census, through 1990, over 9,400 net new housing units were added to the supply. The composition of housing changed. The number of private rental apartments declined between 1980 and 1990, mainly due to condominium conversions. Condominium units increased from about 4,500 in 1980 to over 33,000 in 1990, representing 13% of the housing stock. Units in 1-4 family homes increased between 1980 and 1990, and now constitute over 50% of the city's housing stock. More than 80% of these structures are owner-occupied. Despite the loss of rental units between 1980 and 1990, over 5,000 net new units were added to publicly assisted housing. In 1990, public and publicly assisted housing constituted 17% of the city's housing stock.

Within the city, the U.S. Bureau of the Census reported that the median sales value of a single-family home was $161,400 in 1990. The U.S. Bureau of the Census also reported that the median contract rent in the city was $546 per month in 1990, when market rate units and subsidized units were combined. The city's gross housing vacancy rate in 1990 was 9%, with an estimated 6% net vacancy rate (representing units readily available for occupancy).

Boston's Winter (February) 1998 rental vacancy rate was 2.12% according to a survey of members of the Rental Housing Association, a part of the Greater Boston Real Estate Board. A 1999 study done by Department of Neighborhood Development showed that the median rent for an apartment in Boston as advertised in the newspapers was $1,400 per month through three quarters of 1999 up from $1,375 through three quarters of 1998.

After nearly six years of relative stability, 1990-1996, home prices have risen at a fast pace since the first quarter of 1996. The National Association of Realtors reported that the median sale price of existing homes in the Boston metropolitan area was $212,600 for

Table 15. Median Advertised Asking Monthly Rent in Boston Neighborhoods And the Volume of Advertised Apartments For Three Quarters of the Year, 1998 and 1999

	Median Rent			Volume of Apartments		
Neighborhood	**1998**	**1999**	**% Change**	**1998**	**1999**	**% Change**
Allston/Brighton	$1,150	$1,200	4%	2,146	1,016	(53%)
Back Bay/Beacon Hill	$1,650	$1,650	0%	3,626	2,036	(44%)
Central	$1,700	$1,700	0%	366	225	(39%)
Charlestown	$1,350	$1,450	7%	187	124	(34%)
Dorchester	$813	$1,000	23%	52	34	(35%)
East Boston	$700	$850	21%	21	18	(14%)
Fenway/Kenmore	$1,150	$1,150	0%	108	112	4%
Hyde Park	$900	$900	0%	15	21	40%
Jamaica Plain	$1,100	$1,200	9%	133	101	(24%)
Mattapan	**	**	***	6	2	***
Roslindale	$900	$1,000	11%	51	58	14%
Roxbury	$850	$1,200	41%	13	21	62%
South Boston	$1,200	$1,200	0%	134	133	(1%)
South End	$1,400	$1,500	7%	253	157	(38%)
West Roxbury	$975	$1,080	11%	43	49	14%
Citywide	$1,375	$1,400	2%	7,154	4,107	(43%)

** Less than ten cases so data are not deemed to be reliable.
*** Not meaningful.
Source: City of Boston, Department of Neighborhood Development using the Boston Sunday Globe.

After nearly six years of relative stability, 1990-1996, home prices have risen at a fast pace since the first quarter of 1996. The National Association of Realtors reported that the median sale price of existing homes in the Boston metropolitan area was $212,600 for 1998, an 8.4% increase over the 1997 median sales price. The third quarter 1999 price at $255,000 was 15.4% above the price from third quarter 1998.

Table 16. Greater Boston Annual Median Sales Prices for Existing Homes, 1989-1999

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual Median	Annual % Change
1989	$176,300	$186,200	$183,300	$180,000	$181,900	0.4%
1990	$177,300	$176,200	$175,900	$165,700	$174,100	(4.3)
1991	$160,100	$171,300	$175,500	$167,000	$170,100	(2.3)
1992	$168,200	$173,300	$175,100	$165,200	$171,100	0.6
1993	$160,500	$175,600	$176,900	$172,700	$173,200	1.8
1994	$170,600	$181,300	$188,200	$176,600	$179,300	4.8
1995	$175,100	$179,000	$183,200	$177,400	$179,000	(0.2)
1996	$187,300	$195,300	$195,300	$177,100	$189,300	5.8
1997	$183,300	$194,200	$204,400	$195,900	$196,200	10.6
1998	$205,200	$206,400	$220,900	$214,900	$212,600	8.4
1999	$216,000	$235,200	$255,000	NA	NA	NA

Source: National Association of Realtors and the Greater Boston Real Estate Board.

Table 17. Median Residential Sales Prices for Boston Third Quarter 1997 Through Third Quarter 1999

Year	Quarter	Single Family	Two Family	Three Family	Condominium
1997	Third	$137,250	$150,000	$146,500	$153,000
	Fourth	$139,000	$149,500	$145,000	$150,000
1998	First	$137,900	$161,250	$150,000	$165,500
	Second	$155,000	$169,000	$150,000	$179,000
	Third	$172,700	$178,500	$162,000	$158,000
	Fourth	$155,000	$173,250	$165,000	$159,650
1999	First	$160,000	$180,000	$170,000	$166,463
	Second	$180,000	$185,000	$183,000	$180,000
	Third	$188,950	$200,000	$197,000	$172,750

Source: City of Boston, Department of Neighborhood Development using Banker & Tradesman data, December, 1999.

Table 18. Annual Residential and Condominium Sales in Boston
1990-1998

Year	Total Residential Sales[(1)]	Percent Change	Total Condominium Sales	Percent Change	Residential and Condo Sales(2)	Percent Change
1990	2,559		2,242		4,801	
1991	2,472	(3.4%)	2,063	(8.0%)	4,535	(5.5%)
1992	2,553	3.3	2,217	7.5	4,770	5.2
1993	2,960	15.9	2,450	10.5	5,410	13.4
1994	3,804	28.5	2,668	8.9	6,472	19.6
1995	3,883	2.1	2,746	2.9	6,629	2.4
1996	4,000	3.0	3,396	23.7	7,396	11.6
1997	4,153	3.8	3,912	15.2	8,065	9.0
1998	4,224	1.7	4,593	17.4	8,817	9.3

(1) Total residential sales means all single and multi-family residential properties but not condominiums.
(2) Equals total residential sales plus total condominium sales.
NOTE: Through three quarter of 1999 the data were as follows compared with three quarters of 1998: total residential sales 3,267 versus 3,147 (+3.8%), total condominium sales 3,919 versus 3,527 (11.1%0 and the grand total 7,186 versus 6,674 (7.7%).
Source: Banker and Tradesman.

1998, an 8.4% increase over the 1997 median sales price. The third quarter 1999 price at $255,000 was 15.4% above the price from third quarter 1998.

Within the city of Boston residential sales prices have been increasing at a steady clip for the two years, 1997-1999. The median sales price for a single-family home in Boston reached $188,950 in the third quarter of 1999, showing strong 38% gain over two years, but still affordable, at 74% of the median metropolitan area price. Condominium prices have also increased at a nice pace going from $153,000 in the third quarter of 1997 to $172,750 in the third quarter of 1999, a 13% rise.

Banker & Tradesman, a local trade journal, reported that during the full year 1998 there were 1.7% more non-condominium residential sales in the city than there were in the full year 1997 (4,224 versus 4,153) while condominium sales increased by 17.4% over the

Table 19. Short Term Trends in Housing Prices
Median Sales Prices and Sales Volume of Single Family Homes
In Boston's Neighborhoods, Through Third Quarter 1998 and 1999
(not inflation adjusted)

Neighborhood	1998 Single Family Price	1999 Single Family Price	1998 Percent Change	1999 Sales Volume	Sales Volume	Percent Change
Allston/Brighton	$210,000	$253,000	20%	52	74	42%
Back Bay/Beacon Hill	**	**	***	3	6	***
Central	$557,500	**	***	14	2	***
Charlestown	$261,000	$325,000	25%	50	47	(6%)
Dorchester	$133,000	$145,000	9%	153	177	16%
East Boston	$90,000	$110,000	22%	33	35	6%
Fenway/Kenmore	**	**	***	3	3	***
Hyde Park	$132,000	$150,500	14%	164	164	0%
Jamaica Plain	$253,000	$290,000	15%	57	62	9%
Mattapan	$114,600	$122,000	6%	56	47	(16%)
Roslindale	$161,750	$182,000	13%	132	140	6%
Roxbury	$107,500	$113,000	5%	32	39	22%
South Boston	$147,000	$209,000	42%	55	39	(29%)
South End	**	$660,000	***	10	18	80%
West Roxbury	$205,000	$229,000	12%	233	238	2%
Citywide	$158,000	$179,000	13%	1,047	1,091	4%

** Less than ten sales so data are not deemed to be reliable.
*** Not meaningful.
Note 1: These prices exempt all sales of properties of less than $10,000 and greater than $1,000,000 because those data distort the data mainly because the low price sales are not considered to be "arms-length" transactions..
Note 2: These are not "paired-sales" so the size, quality and type of houses sold vary from year-to-year.
Note 3: Sales volume eliminates those sales mentioned in note 1 and also eliminate sales for properties that were not able to be accurately "geo-coded" for location so actual neighborhood and city wide totals are higher.
Source: City of Boston, Department of Neighborhood Development., December 1999.

Table 20. Short Term Trends in Housing Prices
Median Sales Prices and Sales Volume of Condominiums
In Boston's Neighborhoods, Through Third Quarter 1998 and 1999
(not inflation adjusted**)**

Neighborhood	1998 Condominium Price	1999 Condominium Price	1998 Percent Change	1999 Sales Volume	Sales Volume	Percent Change
Allston/Brighton	$105,500	$116,000	10%	407	564	39%
Back Bay/Beacon Hill	$269,000	$268,250	0%	423	712	68%
Central	$200,000	$227,000	14%	530	319	(40%)
Charlestown	$199,900	$235,000	18%	286	281	(2%)
Dorchester	$72,930	$81,850	12%	90	150	67%
East Boston	$62,000	$79,228	28%	27	36	33%
Fenway/Kenmore	$147,500	$134,500	(9%)	317	312	(2%)
Hyde Park	$113,200	$90,000	(20%)	26	37	42%
Jamaica Plain	$135,000	$144,000	7%	205	253	23%
Mattapan	**	$150,000	***	10	29	***
Roslindale	$101,500	$114,000	12%	40	84	110%
Roxbury	$84,500	$87,450	3%	24	48	100%
South Boston	$140,000	$162,900	16%	188	266	41%
South End	$209,000	$260,750	25%	347	514	48%
West Roxbury	$115,000	$107,250	(7%)	60	110	83%
Citywide	$166,000	$175,000	5%	2,980	3,715	25%

** Less than ten sales so data are not deemed to be reliable.
*** Not meaningful.
Note 1: These prices exempt all sales of properties of less than $10,000 and greater than $1,000,000 because those data distort the data mainly because the low price sales are not considered to be "arms-length" transactions.
Note 2: These are not "paired-sales" so the size, quality and type of houses sold vary from year-to-year.
Note 3: Sales volume eliminates those sales mentioned in note 1 and also eliminate sales for properties that were not able to be accurately "geo-coded" for location so actual neighborhood and city wide totals are higher.
Source: City of Boston, Department of Neighborhood Development., December 1999.

same period (4,593 versus 3,912). Residential (non-condo) sales for the first three quarters of 1999 totaled 3,267, or a rise of 3.8% over the same period in 1998, while condo sales registered a large gain with 3,919 sales through the third quarter of 1999, a rise of 11.1%. When combined, total home sales were 9.3% higher in 1998 and were up by 7.7% through three quarters of 1999. The volume of residential and condominium sales are well above the recessionary levels recorded in 1991.

Prices and sales volumes for single family homes and for condominiums show strength and remarkable diversity across the neighborhoods of Boston. Areas of the city with the largest numbers of single family home sales included West Roxbury, Dorchester, Hyde Park and Roslindale. Single family prices ranged from $110,000 in East Boston to $660,000 in the South End with the median at $179,000 and the typical house going for $229,000 in West Roxbury, the most suburban-style single family neighborhood within the city limits.

Condominium sales volume and prices also showed strength and diversity across the neighborhoods of Boston. The most expensive neighborhoods for condos were in the Back Bay/Beacon Hill, South End, Charlestown, and Central (downtown, including the North End, the West End, and the waterfront) neighborhoods which are the core residential pockets of the city. Four neighborhoods still had "affordable" condominiums with the median price below $100,000. The median citywide condo price through three quarters of 1999 was $175,000, up 5% from the $166,000 price of the same period of 1988. Sales volume was up by 25%

Residential development, which was very slow during the regional recession 1988-1992 and for two years after, increased slightly from 1995 through 1998. Market-rate housing development has accelerated in 1999 when Boston permitted 2,105 units of new and rehabilitated housing of which 788 were market rate or luxury units. Major residential projects now under construction include: Millennium Place (250-300 units), 25 Huntington Avenue known as Trinity Place (141 units of luxury housing), and Davenport Commons in Roxbury (185 units of market-rate and 75 units affordable). Major residential projects in the planning stages include: Battery Wharf (120 units), Park Plaza 2 (100 condominium units), Colonnade Residences (99 units), Landmark Square at Peterborough and Jersey Street in the Fenway (138 units), Boylston Square (250-300 units), Wilkes Passage Lofts (160 units), Boston Center for the Arts (102 units), Piano Row at 150 Boylston Street, 226 Causeway Street in North Station, and Tremont Towers (108 units). In addition, smaller market-rate residential developments are also occurring in surrounding downtown neighborhoods including Charlestown, South Boston, and the South

End. New affordable housing developments are also underway. Of the 1999 total of 2,105 housing units permitted for new construction or rehabilitation, 1,317 of the units were considered “affordable” for low and middle-income families. Future affordable housing projects now in the planning stages include: Parcel C housing in Chinatown (150 units), Parcel 6 in the Fenway (81 units), and Davenport Commons in the South End (75 units).

THE LINKAGE PROGRAM

The city implemented its development linkage program in December 1983, in order to direct some of the benefits of downtown investment to the building of affordable housing in its neighborhoods. Under the program, real estate developers seeking approval of large scale commercial or institutional developments are required to enter into agreements obligating them to make “linkage payments” in the amount of $6 per square foot of construction over 100,000 square feet, of which $1 per square foot goes to a job training fund and $5 per square foot goes for housing purposes.

Linkage payments into the Neighborhood Housing Trust are amortized over a period of either seven or twelve years, depending on the date of the initial agreement. Under Trust policy, current agreements provide for a seven-year payment period. The seven-member Neighborhood Housing Trust (NHT) holds public hearings and approves linkage grants to selected projects, except for the housing creation option, which requires approval by the BRA. As of June 30, 1998, developers of over 50 projects completed or in construction were committed to paying $50.7 million under this program, $46.1 million of these committed housing trust funds had been allocated for the construction or renovation of 4,883 housing units in 70 projects in the city’s neighborhoods. Affordable housing units for low and moderate-income residents comprise 84% (4,098 units) of this total. Of the 70 housing developments created, linkage funds, for the most part, accounted for fewer than 30% of the total development cost of the project. Only in one instance did linkage funds almost completely fund the project. In the past, linkage money generally was allocated to fund low and moderate income housing through the renovation of old buildings and schools as well as to assist in the creation of new housing. Projects have included rental units; single room occupancy such as housing for pregnant, homeless women and alcohol recovery programs; condominiums; housing cooperatives and home ownership.

Funds for the Neighborhood Jobs Trust (NJT) come from Jobs Linkage Fees of one dollar per square foot for every foot in excess of the 100,000 square-foot threshold. This component of Linkage came from the 1986 amendment to the legislation and was followed by the creation of the NJT in 1987. Payments are made in two parts, with one half due at the point a building permit is issued, and the balance due one year later, or upon the issuance of an occupancy permit for the building. Over the 1988-1997 time period $5.4 million of funds have been collected and $4.7 million of funds have been awarded resulting in the creation of 59 programs. Some of the services funded under this program include: model program designs for school-to-work transition, family literacy, workplace-based education, private sector involvement in the design and delivery of services, and capacity building in impacted communities. The NJT is particularly interested in supporting new and innovative education and training activities which result in high wage employment, new or non-traditional employment opportunities, and community based projects that respond to specific communities’ documented education and training needs. The NJT is committed to providing appropriate services to the residents of neighborhoods where (or adjacent to where) a given development project is located. In addition to the $4.7 million awarded, approximately $313,891 has been spent on administration, bringing total expenditures from the NJT to $5.0 million